

CLAIMS

I Claim:

1. An apparatus for boring vehicle axles comprising, in combination, a plate having an aperture adapted to receive a portion of a vehicle axle, a plurality of lugs adjustably secured to said plate and adapted for attachment to a feature of such vehicle axle;

an adjustment assembly having a first end face disposed adjacent said plate, a second end, and a plurality of opposed pairs of adjustment devices adjacent said second end having axes normal to one another;

spacer means disposed between said plate and said end of said adjustment assembly,

a bearing assembly having a first end and a second end, said first end of said bearing assembly operably disposed adjacent said plurality of opposed pairs of adjustment assemblies, said bearing assembly including at least one bearing for stabilizing a boring bar, and

a boring bar drive assembly secured to said second end of said bearing assembly and adapted to advance, retract and rotate a boring bar.

2. The apparatus of claim 1 wherein said adjustment devices includes aligned pairs of threaded members adapted for rotation.

3. The apparatus of claim 2 wherein said boring bar drive assembly includes a first motor adapted to advance and retract said boring bar and a second motor adapted to rotate said boring bar.

4. The apparatus of claim 1 wherein said spacer means includes a plurality of tubular spacers.

5. The apparatus of claim 1 further including an elongate boring bar having at least one elongate channel.

6. The apparatus of claim 1 further including a boring bar having a cutting tool.

7. The apparatus of claim 1 further including a controller for controlling the speed and direction of rotation of said first drive motor.

8. An apparatus for boring vehicle axles comprising, in combination, a plate having an aperture adapted to receive a portion of a vehicle axle defining an axis, a plurality of adjustable lugs secured to said plate and adapted for attachment to a feature of such vehicle axle;

a radial adjustment assembly having a plurality of opposed pairs of adjustment devices having axes of motion normal to said axis of said vehicle axle, said adjustment assembly having a first end disposed adjacent said plate and a second end;

an axial adjustment assembly disposed between said plate and said first end of said radial adjustment assembly,

a bearing assembly having a first end and a second end, said first end of said bearing assembly positioned operably adjacent said plurality of opposed pairs of adjustment devices,

said bearing assembly including at least one bearing for stabilizing a boring bar,

a boring bar supported in said bearing assembly and adapted to bore such vehicle axle; and

a drive assembly associated with said boring bar and having a first drive motor for advancing said boring bar and a second drive motor for rotating said boring bar.

9. The apparatus of claim 8 wherein said feature is a brake flange.

10. The apparatus of claim 8 wherein said axial adjustment assembly includes at least one spacer disposed between said plate and said first end of said radial adjustment assembly.

11. The apparatus of claim 8 wherein said axial adjustment assembly includes a plurality of spacers.

12. The apparatus of claim 8 wherein said radial adjustment assembly includes aligned pairs of threaded members.

13. The apparatus of claim 8 further including a boring bar having a cutting tool.

14. The apparatus of claim 8 further including a controller for controlling the speed and direction of rotation of said first drive motor.

15. An apparatus for repairing vehicle axles comprising, in combination, a plate having an aperture adapted to receive a portion of a vehicle axle, a plurality of mounting ears adjustably secured to said plate and adapted for securement to a feature of such vehicle axle;

a radial adjustment assembly having at least two pairs of opposed adjustment devices having axes of motion normal to one another, said adjustment assembly having a first end disposed adjacent said first plate and a second end;

axial adjustment means disposed between said plate and said first end of said radial adjustment assembly for fixing axial separation between said plate and said first end of said radial adjustment assembly,

a bearing assembly having a first end and a second end, said first end of said bearing assembly disposed operably adjacent said opposed pairs of adjustment devices,

said bearing assembly including at least one bearing for stabilizing a boring bar,

a boring bar supported in said bearing assembly and having a cutting tool adapted to bore such vehicle axle; and

a drive assembly associated with said boring bar and having a first drive motor for advancing said boring bar and a second drive motor for rotating said boring bar.

16. The apparatus of claim 15 wherein said drive assembly is secured to said second end of said bearing assembly.

17. The apparatus of claim 15 wherein said axial adjustment means is a plurality of cylindrical spacers.

18. The apparatus of claim 15 wherein said boring bar includes at least one axial groove disposed therealong.

19. The apparatus of claim 15 wherein said pairs of adjustment devices include threaded shafts and thumb wheels.

20. The apparatus of claim 15 further including a controller for controlling speed and direction of rotation of said first drive motor.